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EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/725,025	SEDDIGH ET AL.	
	Examiner	Art Unit	
	DAVID S. KIM	2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 August 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *31-40* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *31-40* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *02 December 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the following features must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

In claim 35, notice the following limitations:

> responsive to an indication that said current node is said source optical node, ***sending from said current node*** a completion indication to said start optical node;
>
> responsive to an indication that said current node is not said source optical node:
>
> > ***identifying at said current node*** a preceding optical node adjacent to said current node and designated to be on said target lightpath according to provisioning data stored at said current node;
> >
> > ***sending, from said current node***, an identifier of said preceding optical node to said start optical node;
> >
> > setting said preceding node as a current node; and
> >
> > returning to the step of sending said first message

(emphasis Examiner's).

Although support is found for these highlighted limitations in Applicant's paragraph [0034], these highlighted limitations focus on the perspective of the "***current node***". These highlighted limitations most closely correspond to the subject matter of Fig. 5, but Fig. 5 is focused on the perspective of the "***start optical node***". Accordingly, Fig. 5 does not show the highlighted limitations of the perspective of the "***current node***". As a remedy, Examiner respectfully suggests Applicant to amend claim 35 to more closely correspond to Fig. 5, in particular, the perspective of the "***start optical node***".

Claims 36-38 include language that raises the same issue. Similarly, Examiner respectfully suggests Applicant to amend claims 36-38 to more closely correspond to Fig. 5, in particular, the perspective of the "***start optical node***".

2. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being

amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

3. Applicant's response to the objections to claims 39 and 40 in the previous Office Action (mailed on 23 June 2008) is noted and appreciated. Applicant responded by amending claims 39 and 40. Applicant's response overcomes the previous objection, which are presently withdrawn.

Claim Rejections - 35 USC § 112

4. Applicant's response to the rejection of claim 39 under 35 U.S.C. 112, first paragraph (written description) in the previous Office Action (mailed on 23 June 2008) is noted and appreciated. Applicant responded by amending claim 39. Applicant's response overcomes the previous rejection, which is presently withdrawn. However, there are still additional issues under 35 U.S.C. 112.

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. **Claim 35-38** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In claim 35, notice the following limitations:

wherein the step of progressively communicating said first message further comprises:

> ***responsive to an indication that said start optical node is not said source optical node,*** identifying at said start optical node a current node adjacent to said start optical node towards said source optical node and designated to be on said target lightpath according to provisioning data stored at said start optical node;

(emphasis Examiner's).

These limitations correspond to Applicant's Fig. 5 and paragraphs [0033]-[0035].

Regarding the limitation of "***responsive to an indication that said start optical node is not said source optical node***", notice that such "***an indication that said start optical node is not said source optical node***" is not shown in Applicant's Fig. 5 and paragraphs [0033]-[0035]. Although paragraph [0033] does discuss the situation when "the start node is the source node for the light path", Examiner did not find any teaching in Applicant's original disclosure that corresponds to "***an indication that said start optical node is not said source optical node***". Accordingly, the limitation of "***responsive to an indication that said start optical node is not said source optical node***" introduces **new matter**. As a simple remedy, Examiner respectfully suggests Applicant to remove the limitation of "***responsive to an indication that said start optical node is not said source optical node***".

Claims 36-38 include language that raises the same issue:

(claim 36) "responsive to an indication that said start optical node is not said destination optical node"

(claim 37) "responsive to an indication that said start optical node is not said source optical node"

(claim 38) "responsive to an indication that said start optical node is not said destination optical node"

Similarly, Examiner respectfully suggests Applicant to remove these limitations from claims 36-38.

7. **Claim 40** is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Notice the following limitations of claim 40:

storing at said ***each*** optical node a set of identifiers of all optical nodes in said optical network;

(emphasis Examiner's).

Claim 40 corresponds to the Global Discovery procedure in Applicant's Fig. 6 and paragraph [0036].

Regarding the limitation of "storing at said ***each*** optical node a set of identifiers of all optical nodes in said optical network", notice that such "storing" does not occur at ***each*** optical node. Rather, Applicant's paragraph [0036] states that such "a set of identifiers of all optical nodes" "is readily ***available*** to every optical node". To be "***available*** to every optical node" is not equivalent to "storing" at ***each*** optical node. Examiner did not find any teaching in Applicant's disclosure where such "storing" ***actually*** takes place at ***each*** optical node. Accordingly, this limitation introduces **new matter**. In contrast, the Global Discovery procedure is invoked at a ***start*** optical node (paragraph [0031]). Thus, as a simple remedy, Examiner respectfully suggests Applicant to amend the limitation as follows:

> storing at said ~~each~~ start optical node a set of identifiers of all optical nodes in said optical network;
>
> (emphasis Examiner's).

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. **Claim 39** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Notice a first group of limitations of claim 39:

> …sending, from each specific neighboring node, messages to ***all successive neighboring nodes*** of said each specific neighboring node requesting indication of detection of said target optical signature, wherein said each successive neighboring node is discovered from available topology information;
>
> receiving, at said start optical node, an acknowledgment from ***each successive neighboring node which detects said target optical signature***;…
>
> (emphasis Examiner's).

This first group of limitations of claim 39 introduces a set (A) of "***successive neighboring nodes***". Within this set, there are two subsets. One subset (B) comprises "each successive neighboring node ***which detects said target optical signature***". The other subset (C) comprises "each successive neighboring node which" ***does not detect*** "said target optical signature".

Notice a second group of limitations of claim 39 (which follow the first group of limitations cited above):

> …adding an identifier of ***said each successive neighboring node*** to said local-discovery list;
>
> wherein ***said each successive neighboring node*** responds only once to a request for indication of detection of said target optical signature
>
> (emphasis Examiner's).

This second group of limitations of claim 39 refers to "***said each successive neighboring node***". However, the antecedent reference of these instances of "***said each successive neighboring node***" is unclear. That is, do these instances of "***said each successive neighboring node***" belong to set A or subset B or subset C of "***successive neighboring nodes***"? Thus, this second group of limitations of claim 39 render claim 39 to be indefinite.

According to the specification (paragraph [0037]), it appears that these instances of "***said each successive neighboring node***" belong to subset B. Therefore, Examiner offers the following suggestions for clarifying the antecedent reference of these instances of "***said each successive neighboring node***":

> …adding an identifier of ***said each successive neighboring node*** which detects said target optical signature to said local-discovery list;
>
> wherein ***said each successive neighboring node*** which detects said target optical signature responds only once to a request for indication of detection of said target optical signature
>
> (emphasis Examiner's).

10. **Claim 40** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Notice the limitations of claim 40:

> including said identifier of ***said each individual optical node*** in a global-discovery list for comparison with said second sequence of optical nodes
>
> (emphasis Examiner's).

Similar to the issues of claim 39 under 35 U.S.C. 112, second paragraph, above, the scope of "***said each individual optical node***" is unclear. That is, Applicant's paragraph [0036] states that the Global

Discovery list will include "all the optical nodes which have detected the wavekey". Therefore, Examiner offers the following suggestions for clarifying the scope of "***said each individual optical node***".

> including said identifier of ***said each individual optical node*** which detects said target optical signature in a global-discovery list for comparison with said second sequence of optical nodes

(emphasis Examiner's).

Allowable Subject Matter

11. The indicated allowability of **claims 33-34** is withdrawn in view of the newly discovered reference(s) to Stephens et al. (U.S. Patent No. 6,347,079 B1). Rejections based on the newly cited reference(s) follow.

12. The indicated allowability of **claims 35-38** is withdrawn in view of the new grounds of rejection under 35 U.S.C. 112, first paragraph, above.

Claim Rejections - 35 USC § 103

13. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

14. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

15. **Claims 32-34, and 40** are rejected under 35 U.S.C. 103(a) as being unpatentable over Carrick et al. (U.S. Patent No. 7,016,607 B1, hereinafter "Carrick") in view of Weik (*Fiber Optics Standard Dictionary, 3rd ed.*), Rajagopalan et al. ("IP over optical networks: architectural aspects", hereinafter "Rajagopalan"), and Stephens et al. (U.S. Patent No. 6,347,079 B1, hereinafter "Stephens").

Regarding claim 33, Carrick discloses:

A method for monitoring light paths in an optical network comprising a plurality of optical nodes, each associated with a respective nodal identifier, said optical nodes interconnected by wavelength-multiplexed links and exchanging control signals through a control network, the method comprising the steps of:

modulating an optical signal of each lightpath by an identifying optical signature (e.g., pilot tones in Fig. 1);

storing (network database 176), for each lightpath planned to traverse said each optical node:

an identifier of a respective optical signature (e.g., “expected pilot tones” in col. 4, l. 26); and

identifiers of adjacent optical nodes designated to be along said each light path (e.g., “adjacent nodes” in col. 4, l. 33-39; e.g., “map the entire network” in col. 7, l. 10-11, implies some kind of storing of *every* node, which would include storing identifiers of said “adjacent nodes”);

selecting a target lightpath connecting a source optical node to a destination optical node (e.g., 210 in Fig. 2) and a start optical node along said target lightpath (e.g., scanning of each node of a path in col. 4, l. 23-25, implies “selecting…a start node along said target lightpath”; e.g., "select pilot tone source” node in step 310 in Fig. 3), and:

determining a target optical signature associated with said target lightpath (e.g., "first pilot tone value" in step 310 in Fig. 3).

Carrick does not expressly disclose:

storing ***at each optical node***, for each lightpath planned to traverse said each optical node:

an identifier of a respective optical signature; and

identifiers of adjacent optical nodes designated to be along said each light path;

at a command-line interface *communicatively coupled to said start optical node*:

determining a target optical signature ***stored at said start optical node*** and associated with said target lightpath;

progressively communicating ***a first message*** *comprising* ***said target optical signature*** *to adjacent optical nodes to determine a first sequence of optical nodes designated to form said target lightpath;*

progressively communicating ***a second message*** *comprising* ***said target optical signature*** *to adjacent optical nodes to determine a second sequence of optical nodes actually receiving said target optical signature;* and

comparing *said second sequence to said first sequence*;

wherein said start optical node is an intermediate optical node between a source optical node and a destination optical node of said target lightpath, and wherein said first sequence is determined as:

a list of preceding nodes, each storing an identifier of said target optical signature, between said start optical node and said source optical node; and

a list of succeeding nodes, each storing an identifier of said target optical signature, between said start optical node and said destination optical node.

Regarding the limitation of "storing ***at each optical node***", Carrick's step of storing employs a database (network database 176 in Fig. 1). Carrick is relatively silent about the actual physical location of storing this database. Weik teaches that a database may be geographically distributed among several repositories ("database" on p. 186), as in a distributed database ("distributed database" on p. 242-243). Accordingly, obvious variations would include storing the database of Carrick in multiple physical locations. Obvious choices of such multiple physical locations would include the nodes of Carrick, even ***each*** node of Carrick.

Regarding the limitation of "***at a command-line interface*** *communicatively coupled to said start optical node*", notice that Carrick's method is implemented using a processor, program code, and a computer (col. 11, l. 42 - col. 12, l. 10). A command-line interface is an obvious limitation for Carrick's method since it is an extremely common way for a practitioner to interface with a processor, program code, and a computer. Notice that the method of Carrick communicates with the start node (e.g., scanning of each node of a path in col. 4, l. 23-25, implies communicating with the "start node"). Since

one could obviously interface with the method of Carrick through a command-line interface, common commands, such as running the method of Carrick, would be communicated to the various nodes, including the start node. Such communication would mean that the command-line interface would be communicatively coupled to the various nodes, including the start optical node.

Regarding the limitation of "a target optical signature ***stored at said start optical node***", notice obviousness argument above of storing the Carrick's database in ***each*** optical node. Since the target optical signature (e.g., "expected pilot tones" in col. 4, l. 26) would be in Carrick's database, the target optical signature would be ***stored*** in each optical node, including ***at said start optical node***.

Regarding the limitation of "*progressively communicating **a first message** comprising **said target optical signature** to adjacent optical nodes to determine a first sequence of optical nodes designated to form said target lightpath*", Carrick does teach the determination of "*a sequence of optical nodes designated to form said target lightpath*" ("expected order" in col. 5, l. 35-36). Carrick is relatively silent about the origin of this target lightpath. Thus, at the time the invention was made, it would have been obvious to one of ordinary skill in the art to incorporate any suitable teachings about the origin of the target lightpath of Carrick. One of ordinary skill in the art would have been motivated to do this to provide further details about how to actually implement the method of Carrick. For example, Rajagopalan provides such suitable teachings about the origin of a target lightpath (e.g., the example of CR-LDP signaling for path establishment on p. 99-100). Moreover, Rajagopalan's teachings also include "*progressively communicating **a message*** (Label Request on p. 100) *comprising a target optical signature* ("path identifier" on p. 100, col. 1, last paragraph) *to adjacent optical nodes* (nodes in Fig. 6) *to determine a first sequence of optical nodes designated to form a target lightpath* (any suitable, established path in Fig. 6)". Also, notice that, since the ***target optical signature*** of Carrick is a path identifier (e.g., pilot tones in Fig. 1), it would constitute a suitable "path identifier" of Rajagopalan (p. 100, col. 1, last paragraph). Accordingly, in view of Rajagopalan, the prior art of record would teach "*progressively communicating **a first message** comprising **said target optical signature** to adjacent optical nodes to determine a first sequence of optical nodes designated to form said target lightpath*".

Regarding the limitation of "*progressively communicating **a second message** comprising **said target optical signature** to adjacent optical nodes to determine a second sequence of optical nodes actually receiving said target optical signature*", Carrick does suggest "*progressively communicating **a message*** (e.g., scanning in col. 4, l. 23-25, suggests the communication of some kind of message that would prompt this scanning) *to adjacent optical nodes* (e.g., scanning of each node of a path in col. 4, l. 23-25, includes adjacent optical nodes) *to determine a second sequence of optical nodes actually receiving said target optical signature* ("actual optical path" in step 540 in Fig. 5)". Carrick does not expressly disclose that this "***message***" comprises "***said target optical signature***". Rather, this suggested "***message***" of Carrick would prompt some kind of scanning of nodes, such as scanning a node to generate a list of its detected pilot tones (e.g., scanning of each node of a path in col. 4, l. 23-25). One may characterize this scanning as the question, "What optical signatures have you received?" Then, the result is processed with results from other nodes to determine the desired "*sequence of optical nodes actually receiving said target optical signature*". Other obvious variations would include other suitable ways to provide this same desired "*sequence of optical nodes actually receiving said target optical signature*". For example, a simpler and more direct question would be, "Have you received the target optical signature?" Such a simpler and more direct way would constitute an obvious variation. In view of this simpler and more direct question, the corresponding "***message***" of Carrick would comprise "***said target optical signature***".

Regarding the limitation of "***comparing** said second sequence to said first sequence*", Carrick does teach "***comparing** said second sequence to said first sequence*" (col. 8, l. 42-44).

Regarding the limitation of "wherein said first sequence is determined as" "***a list of preceding optical nodes***" and "***a list of succeeding optical nodes***", it is known in the art to determine a sequence of nodes as a list of preceding nodes and as a list of succeeding nodes, as shown by Stephens (lists in Fig. 10B). At the time the invention was made, it would have been obvious to one of ordinary skill in the art to determine the sequences of the prior art of record (Carrick, "expected order" in col. 5, l. 35-36; "actual optical path" in step 540 in Fig. 5) according to any suitable known procedure, such as the lists of Stephens. One of ordinary skill in the art would have been motivated to do this since doing so is one of a

number of suitable and arbitrary procedures for arranging sequences of objects. Moreover, the procedure of Stephens also provides the additional benefit of sorting by distance (Stephens, col. 13, l. 47).

Regarding claim 34, claim 34 corresponds largely to claim 35. Therefore, the recited limitations in claim 34 read on the corresponding limitations in claim 35. Claim 35 also includes limitations absent from claim 34. Carrick in view of Weik, Rajagopalan, and Stephens also discloses these limitations:

wherein said start optical node is an intermediate optical node between a source optical node and a destination optical node of said target lightpath (Stephens, node B in Figs. 10A and 10B), and wherein said second sequence (Carrick, "actual optical path" in step 540 in Fig. 5) is determined as:

a list comprising each preceding node which detects said target optical signature along said target lightpath between said start optical node and said source optical node (Stephens, Backward Response List in Fig. 10B); and

a list comprising each succeeding node which detects said target optical signature along said target lightpath between said start optical node and said destination optical node (Stephens, Forward Response List in Fig. 10B).

Regarding claim 32, Carrick in view of Weik, Rajagopalan, and Stephens discloses:

The method of claim 33 wherein the step of comparing comprises a further step of determining congruence of said first sequence and said second sequence to ascertain routing correctness of said target lightpath (Carrick, col. 8, l. 40-44).

Regarding claim 40, Carrick in view of Weik, Rajagopalan, and Stephens discloses:

The method of claim 33 further comprising:

storing at said each optical node a set of identifiers of all optical nodes in said optical network (see the obviousness argument about a "distributed database" above);

sending a message (e.g., scanning in col. 5, l. 8-11, suggests the communication of some kind of message that would prompt this scanning) from a command-line interface communicatively

coupled (see the obviousness argument about the "command-line interface" above) to said start optical node to each other optical node (e.g., scanning of each node of the network in col. 5, l. 8-11), said message containing an identifier of said target optical signature (see the obviousness argument about "Have you received the target optical signature?" above), said message requesting each individual optical node which detects said target optical signature, to send a response (e.g., the prompting of the scanning of a node in col. 5, l. 8-11, constitutes a request for a response of the results of the scanning) said response including an identifier of said each individual optical node (the list of nodes in col. 5, l. 8-11 would constitute a list of identifiers of each of these nodes); and

including said identifier of said each individual optical node in a global-discovery list (e.g., "actual list" in col. 5, l. 8-11) for comparison with said first sequence of optical nodes (e.g., "comparing" in col. 8, l. 40-44).

Carrick in view of Weik, Rajagopalan, and Stephens does not expressly disclose:
said message containing an identifier of said target optical signature ***and an identifier of said start optical node***, said message requesting each individual optical node which detects said target optical signature, to send a response ***to said target start node*** said response including an identifier of said each individual optical node.

Rather, Carrick generally teaches control of the network through the network management services 170 in Fig. 1. Carrick is relatively silent about the actual physical location of 170. Weik teaches that one may provide control of a network from multiple points ("distributed control" on p. 242). Accordingly, obvious variations would include locating 170 in multiple physical locations. Obvious choices of such multiple physical locations would include the nodes of Carrick. Accordingly, the location of a control point node would constitute a ***start optical node***. Since control communications would flow ***from*** this start optical node, the start optical node would generally want to communicate its identity to the other nodes

communicate with the start optical node. Obviously, the start optical node communicating its identity is performed through some kind of ***identifier of said start optical node*** in its control communications, i.e., messages. Similarly, since control communications would flow ***to*** this start optical node, control communications, i.e., messages would request responses to be directed ***to said start node***.

16. **Claim 31** is rejected under 35 U.S.C. 103(a) as being unpatentable over Carrick in view of Weik, Rajagopalan, and Stephens, as applied to the claims above, and further in view of the admitted prior art (hereinafter the "APA").

Regarding claim 31, Carrick in view of Weik, Rajagopalan, and Stephens does not expressly disclose:

The method of claim 33 wherein said first message and said second message are communicated through an external data network.

However, said first message and second message may be characterized as control messages, and communicating control messages through an external data network is well known, as exemplified by the APA (control network CN IP Network in Applicant's Fig. 1). Clearly, control messages would have to be communicated through some suitable means, and an external data network would constitute an obvious variation.

Response to Arguments

17. Notice the new grounds of rejection under 35 U.S.C. 112.

18. Notice the new grounds of rejection under 35 U.S.C. 103 in view of newly discovered teachings from Stephens.

Conclusion

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID S. KIM whose telephone number is (571)272-3033. The examiner can normally be reached on Mon.-Fri. 9 AM to 5 PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth N. Vanderpuye can be reached on 571-272-3078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. S. K./
Examiner, Art Unit 2613

/Kenneth N Vanderpuye/
Supervisory Patent Examiner, Art Unit 2613